IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT	:	Andreas Kellner et al.	DOCKET NO.:		DE000148
SERIAL NO.	:	09/954,657	EXAMINER	:	Huyen X. Vo
FILED	:	September 18, 2001	ART UNIT	:	2626
FOR	:	DIALOG SYSTEM			

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APPEAL BRIEF TRANSMITTAL LETTER

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA. 22313-1450

Dear Sir:

Appellants respectfully submit three copies of an Appeal Brief For Appellants that includes an Appendix with the pending claims. The Appeal Brief is now due on November 28, 2006.

Appellants enclose a check in the amount of $500.00 covering the requisite Government Fee.

Should the Examiner deem that there are any issues which may be best resolved by telephone communication, kindly telephone Applicants undersigned representative at the number listed below.

Respectfully submitted,
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By: Steve Cha
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Date: November 28, 2006

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Steve Cha, Reg. No. 44,069
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(Signature and Date)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before the Board of Patent Appeals and Interferences

In re the Application

Inventor	:	**Andreas Kellner et al.**
Application No.	:	**09/954,657**
Filed	:	**September 18, 2001**
For	:	**DIALOG SYSTEM**

APPEAL BRIEF

On Appeal from Group Art Unit 2626

Paul Im
Registration No. 50,418

Date: November 28, 2006

By: Steve Cha
Attorney for Applicant
Registration No. 44,069

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I. REAL PARTY IN INTEREST

The real party in interest is the assignee of the present application, U.S. Philips Corporation, and not the party named in the above caption.

II. RELATED APPEALS AND INTERFERENCES

With regard to identifying by number and filing date all other appeals or interferences known to Appellant which will directly effect or be directly affected by or have a bearing on the Board's decision in this appeal, Appellant is not aware of any such appeals or interferences.

III. STATUS OF CLAIMS

Claims 1-8 and 10-12 have been presented for examination. All of these claims are pending, stand finally rejected, and form the subject matter of the present appeal.

IV. STATUS OF AMENDMENTS

The Amendment after the Final Office Action filed August 17, 2006 has been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The instant application recites in independent claim 1, a system, in independent claim 7, a method, and in independent claim 8, a process for performing a dialog system that adapts the content and form of the system outputs based on the determined style and experience level of the user. The remaining claims (claims 2-6 and

10-12) depend from the independent claims and recite further aspects of the invention claimed.

Claim 1, which is typical of the remaining independent claims, recites a dialog system wherein the contents and form of the system outputs are adapted to the style of speech of user inputs and/or to the behavior of a user during a dialog with the dialog system (see page 1, lines 24-25). The dialog system is illustrated in Figure 1, wherein an interface 2 provides for receiving user inputs, preferably speech inputs, to the dialog system. The details about the style of speech and dialog interactions of a user are contained in an associated user model, which is then evaluated by the dialog system. (see page 1, lines 26-28). The dialog system generates system outputs adapted to a user's input style so that the style of speech is considered pleasant by the respective user. (see page 1, line 28-page 2, line 1). The user model generated with regard to the style of speech take into account factors such as the number of polite phrases used, the address used, the speech level, information density, vocabulary, number of different user inputs and the occurrence and frequency of words used (see page 3, lines 24-33). In dependence on the determined input speech data, the system outputs are adapted and in further dependence on the information density in a speech input more or fewer extensive system outputs are generated. (see page 4, lines 1-5).

Independent claim 7 recites a method operating in a dialog system for deriving user models from details regarding the style of user inputs (preferably speech inputs) and based on the determined style of speech adapting the system outputs in content and/or form and further providing more or fewer extensive system outputs based on a determined experience level. Independent claim 8 recites a process used in a

television dialog system receiving user [speech] input, deriving user models from details regarding the style of the user inputs and adapting the system outputs in content and/or form based on the determined style of the inputs and to provide more or fewer extensive system outputs based on a determined experience level.

VI. GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed on appeal are whether:

1. Claims 1, 3, 5-8 and 11 are unpatentable under 35 USC §103(a) over the combination of Junqua in view of Partovi and further in view of Allinger;

2. Claims 2, 4 and 10 are unpatentable under 35 USC §103(a) over the combination of Junqua, Partovi, and Allinger and further in view of Larsen; and

3. Claim 12 is unpatentable under 35 USC §103(a) over the combination of Junqua, Partovi, and Allinger, as applied to claim 8 and further in view of Toyama.

VII. ARGUMENT

1. 35 USC §103 Rejection of claims 1, 3, 5-8 and 11

The rejection of claims 1, 3, 5-8 and 11 is in error because the references fail to show a limitation cited in the independent claims and the claims depending therefrom.

The instant invention, as recited in claim 1, for example, claims a dialog system that derives user models based on characteristics and style of user inputs (typically, speech inputs, but not limited to speech inputs) and adapts the content and/or form of the system outputs based on the derived user style and further by a determined experience level to provide more or fewer extensive system outputs.

Junqua recites a system for identifying and adapting a TV-user profile by means of speech technology that controls interaction with television using speech, whereby each user of the system may have a set of determined preferences that are automatically selected through identification/verification of the speaker's voice. (see col. 1, lines 8-11).

Junqua fails to disclose "the system output in content and/or form is based on the experience level of the user model in that if the experience level is low, the system output is a first length, while if the experience level is high, the system output is a second length lesser than the first length," as is recited in the claims.

Partovi discloses a method and apparatus for providing personalized information content over telephone lines. Partovi discloses that the personalized content is specific to the user based on her/his telephone identifying information and may be further customized based on the time, data, the calling party's dialect and speech pattern. Partovi further discloses that embodiments of the invention will immediately present a caller personalized content based on her/his profile using the appropriate dialect as well as the caller's preferred content. (see abstract).

Alligner teaches a system including a plurality of predetermined materials regarding a subject matter, each one of the predefined materials containing more information than a preceding one of the predetermined materials. The system provides for the selection of one of the predetermined materials to a user based on the user's command inputs for a desire for more information.. (see for example, page 7, lines 10-15, "[t]o enable the guided tour to be shortened for visitors with prior knowledge in individual areas, the database preferably also contains one or more abbreviated versions

of logically preceding information units for each information unit, which is placed before the detailed information selected by the system.").

Alligner further teaches initially providing the same material content to a user. This initial presentation is independent of the experience level of the user. Alligner further allows for the additional presentation of material based on the user's desire to learn more or less. (see, for example, page 8, lines 5-10, "[t]he selection of the information in accordance with the core information offered to each visitor is carried out, e.g., by using subject parameters for the individual subject areas which, in the case of approval by the visitor to information offered for this area is increased ... or reduced.").

Thus, after the initial presentation of information to both experienced and inexperienced user, Alligner allows the system to respond to user commands to provide additional information.

Contrary to the reason for rejecting the claims, as recited in the Final Office Action and for maintaining the rejection of the claims, as recited in the Advisory Action, the combination of Juaqua, Partovi and Allinger fail to render obvious the aforementioned claims as neither Juaqua, Partovi nor Allinger teach or suggest "adapting the output content and/or form based on the input style and further by the experience level if the experience level is low, the system output is a first length, while if the experience level is high, the system output is a second length lesser than the first length."

Rather, the output of a device constructed from the teachings of Juanqua, Partovi and Alligner is not determined based on the user model and the experience level of the user, as is recited in the claims. The teachings of Alligner, which is recited to teach the missing claim limitation, fails to teach adapting the output based on the experience level,

but rather on the level of information desired by the user, as both experienced and inexperienced users may receive the same level of information based on the desires of the users to learn (or hear) more information.

It is respectfully submitted that in order to establish a *prima facie* case of obviousness, three basic criteria must be met;

> 1. there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference teachings;
>
> 2. there must be a reasonable expectation of success; and
>
> 3. the prior art reference must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)

With regard to the invention as recited in claim 1, applicant respectfully submits that a *prima facie* case of obviousness has not been set forth as the combination of the cited references fails to teach or suggest all the claim limitations recited.

With regard to independent claims 7 and 8, these claims were rejected for the same reason stated in rejected claim 1. Claims 7 and 8 include subject matter similar to that recited in claim 1. Hence, for the remarks made with regard to claim 1, which are reasserted in response to the rejection of claims 7 and 8, applicant respectfully submits that a *prima facie* case of obviousness has not been set forth with regard to the claims.

With regard to the remaining dependent claims, these claims depend from the independent claims and are allowable at least for their dependence upon allowable base claims, without even contemplating the merits of the dependent claims, as held by *In re*

Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) (if an independent claim is non-obvious under 35 U.S.C. §103(a), then any claim depending therefrom is non-obvious).

2. 35 USC §103 Rejection of claims 2, 4 and 10

The rejection of claims 2, 4 and 10 is in error because the combination of the references fails to show a limitation cited in the independent claims from which claims 2, 4 and 10 depend.

Claims 2, 4 and 10 depend from the independent claims, which include subject matter not disclosed by the combination of Juaqua, Partovi and Allinger. Larsen references fails to disclose the subject matter found deficient in the combination of Juaqua, Patovi and Allinger. Hence, Claims 2, 4 and 10 are not rendered obvious by the cited references as the combination of the cited references fails to disclose a material element claimed.

Applicant further submits that claims 2, 4 and 10 are allowable at least for its dependence upon an allowable base claim, without even contemplating the merits of the dependent claim for the reasons held in *In re Fine,* 837 F.2d 1071, 5 USPQ 2d 1596 (Fed. Cir. 1988) (if an independent claim is non-obvious under 35 U.S.C. §103(a), then any claim depending therefrom is non-obvious).

In view of the above, applicant submits that the above referred-to claims are patentable over the teachings of the cited references.

3. 35 USC §103 Rejection of claim 12

The rejection of claim 12 is in error because the combination of the references fails to show a limitation cited in the independent claims from which claim 12, depends.

Claim 12 depends from independent claim 8, which includes subject matter not disclosed by the combination of Juaqua, Partovi and Allinger. The Toyama reference fails to disclose the subject matter found deficient in the combination of the teachings of Juaqua, Partovi and Allinger. Hence, claim 12 is not rendered obvious by the cited references as the combination of the cited references fail to disclose a material element claimed.

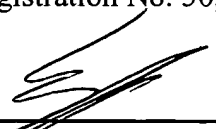
Applicant further submits that claims 12 is allowable at least for its dependence upon an allowable base claim, without even contemplating the merits of the dependent claim for the reasons held in *In re Fine,* 837 F.2d 1071, 5 USPQ 2d 1596 (Fed. Cir. 1988) (if an independent claim is non-obvious under 35 U.S.C. §103(a), then any claim depending therefrom is non-obvious).

In view of the above, applicant submits that the above referred-to claims are patentable over the teachings of the cited references.

VIII. CONCLUSION

In view of the above analysis, it is respectfully submitted that the referenced teachings, whether taken in combination fail render obvious the subject matter of any of the present claims. Therefore, reversal of all outstanding grounds of rejection is respectfully solicited.

Respectfully submitted,
Paul Im
Registration No. 50,418



Date: November 28, 2006

By: Steve Cha
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Registration No. 44,069

IX. CLAIMS APPENDIX

Claim 1. A dialog system comprising processing units for

- automatic speech recognition,
- natural language understanding,
- generating acoustic and/or visual system outputs,
- deriving user models from determined details about the style of speech of user inputs and/or details about interactions in dialogs between users and the dialog system (1), wherein the style of speech is determined based on factors selected from the group consisting of: the number of polite phrases used, address used, speech level, information density, vocabulary and use of foreign words, number of different words and classification of words of speech inputs with respect to rare occurrence; and

adaptation of system outputs in dependence on the derived user models, wherein the system outputs are adapted in content and/or form in dependence on the derived models including an experience level, wherein if the experience level is low, the system output is a first length, while if the experience level is high, the system output is a second length lesser than the first length.

Claim 2. A dialog system as claimed in claim 1, wherein in addition to the input modality to use user inputs by means of speech, at least a further input modality is provided and in that the user models contain details about the respective use of the various input modalities by the user.

Claim 3. A dialog system as claimed in claim 1, wherein the user models contain estimates for the reliability of recognition results derived from user inputs.

Claim 4. A dialog system as claimed in claim 3, wherein in dependence on the estimates, system responses are generated which prompt the respective user to use such input

modalities for which high estimate values were determined and/or which prevent the respective user from using input modalities for which low reliability values were determined.

Claim 5. A dialog system as claimed in claim 1,
wherein fixed models of user stereotypes are used for forming the user models.

Claim 6. A dialog system as claimed in claim 1, wherein user models are used which are continuously updated based on inputs of the respective user.

Claim 7. A method of operating a dialog system, in which processing units are used for

- automatic speech recognition,
- natural language understanding,
- generating acoustic and/or visual system outputs, and
- deriving user models from details about the style of speech of user inputs and/or indications about interactions in dialogs between users and the dialog system, wherein the style of speech is determined based on factors selected from the group consisting of: the number of polite phrases used, address used, speech level, information density, vocabulary and use of foreign words, number of different words and classification of words of speech inputs with respect to rare occurrence; and

adapting system outputs in dependence on the user models, wherein the system outputs are adapted in content and/or form in dependence on the derived models including an experience level, wherein if the experience level is low, the system output is a first length, while if the experience level is high, the system output is a second length lesser than the first length.

Claim 8. A process for television-user dialog, comprising:

receiving user speech input;

processing the speech input using automatic speech recognition and natural language understanding; and

defining at least one system output based on the speech input and a user model derived from details of the user style of speech inputs, wherein the style of speech is determined based on factors selected from the group consisting of: the number of polite phrases used, address used, speech level, information density, vocabulary and use of foreign words, number of different words and classification of words of speech inputs with respect to rare occurrence, wherein the system output in content and/or form is based on the experience level of the user model in that if the experience level is low, the system output is a first length, while if the experience level is high, the system output is a second length lesser than the first length.

Claim 9. (canceled)

Claim 10. The process as claimed in claim 8, wherein the step of defining comprises:

defining at least one system output based on the speech input and a user model which includes a likely input modality for a current prompt, wherein the system output is based on the likely input modality.

Claim 11. The process as claimed in claim 8, wherein the step of defining comprises:

defining at least one system output based on the speech input and a user model which includes a familiarity level, wherein the system output is based on the familiarity level.

Claim 12. The process as claimed in claim 8, further comprising:

receiving a user face image; and

determining a degree of despair based on the user face image; wherein the step of defining comprises:

defining at least one system output based on the degree of despair.

X. EVIDENCE APPENDIX

No supplemental evidence was provided by applicant that was entered into the record during the prosecution of this matter.

XI. RELATED PROCEEDING APPENDIX

No related proceedings are pending and, hence, no information regarding same is available.